APPENDIX

01

1. (Thrice Amended) A tailless aircraft, including:

a wing having a trailing edge and independently deflectable flight control surfaces located along the trailing edge, the wing being capable during flight of generating a normal lifting force having a spanwise force distribution across the wing; and

a control surface reconfiguration system wherein, for each of a plurality of different flight conditions, the flight control surfaces are selectively reconfigurable to respective predetermined positions, which in combination, optimize the spanwise force distribution across the wing for each of the plurality of different flight conditions including a low speed flight condition wherein first selected ones of the deflectable flight control surfaces located at stall-critical spanwise locations are positioned to increase a local coefficient of lift and other deflectable flight control surfaces are positioned to control pitch trim.

02

6. The aircraft as set forth in Claim 1, wherein the plurality of flight conditions include a pitch maneuver wherein the deflectable flight control surfaces are positioned to minimize the bending moment with respect to a bend axis of the wing.

03 Cont.

11. An aircraft, including:

a wing having a trailing edge and independently deflectable control surfaces located along the trailing edge, the wing being capable during flight of generating a normal lifting force having a spanwise force distribution across the wing; and

reconfiguration means for selectively reconfiguring the control surfaces to respective predetermined positions, which in combination, are effective to optimize the spanwise force distribution across the wing for each of a plurality of different flight

conditions including a low speed flight condition wherein selected ones of the deflectable flight control surfaces located at stall-critical spanwise locations are positioned to increase a local coefficient of lift and other deflectable flight control surfaces are positioned to control pitch trim.

16. The aircraft as set forth in Claim 11, wherein the plurality of flight conditions include a pitch maneuver wherein the deflectable flight control surfaces are positioned to minimize the bending moment with respect to a bend axis of the wing.

19. A method for controlling flight of a blended wing-body, tailless aircraft which includes a wing having a trailing edge and independently deflectable flight control surfaces located along the trailing edge which are deflectable in upward and downward directions, the wing being capable during flight of generating a normal lifting force having a spanwise distribution across the wing, the method including the steps of:

predetermining for each of a plurality of different flight conditions the respective position for each of the flight control surfaces, which in combination, optimize the spanwise force distribution across the wing for each of said different flight conditions including a low speed flight condition wherein first selected ones of the deflectable flight control surfaces located at stall-critical spanwise locations are positioned to increase a local coefficient of lift and other deflectable flight control surfaces are positioned to control pitch trim;

subjecting said aircraft to at least one of said different flight control conditions; and

reconfiguring the control surfaces upwardly or downwardly to the respective predetermined positions when subjecting said aircraft to each of said at least one flight control conditions to optimize the spanwise force distribution across the wing.